



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D2360

Job Sheet 171400



Part No: D2360

Job Qty: 10 ea

Part Name: Litter Tie Down Bracket



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 1/31/18

Job Tracking No:

Due Date: 2/12/18

Created By: Michelle Gagnon-Donovan

Type: Stock

Description:

Note: DWG D2341 REV G, D2360 REV D IPP rev H 07.06.12 ecn 825 EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	10 Ea		2/9/18	0.00	0.00	Start Up Machining		SB L 18/04/13
100	Bandsaw	10 pcs		2/9/18	0.00	0.33	Bandsaw1		SB L 18/04/13
110	CNC Vertical Machining	10 pcs		2/10/18	0.26	14.93	HAAS 1		SB L 18/04/13
120	QC	10 pcs		2/10/18	0.00	0.00	QC2		SB L 18-04-11
130	QC	10 pcs		2/10/18	0.00	0.00	QC8		SB L 18/04/14
140	HandFinish	10 pcs		2/10/18	0.00	0.78	HandFinish1		SA 18-04-16
150	Powdercoat	10 pcs		2/10/18	0.00	0.60	Powdercoat1		SA 18-04-19
160	QC	10 pcs		2/10/18	0.00	0.00	QC3		38
170	Small Fab	10 pcs		2/12/18	0.00	3.14	Small Fab		38
180	QC	10 pcs		2/12/18	0.00	0.00	QC5		38
190	Packaging	10 pcs		2/12/18	0.00	0.00	Packaging3	ST	ST MAY 08 2018
200	QC21-SA	10 Ea		2/12/18	0.00	0.00	QC21		

Part Op 100 - Cut blanks: 12.65" Long

Descriptions: 110 - Machine as per Folio D2341 and Dwg D2341

150 - START TIME: 1:35

170 - Assemble as per dwg D2360

FINISH: 2:05 M 138760

6 x 5047998 → 5047998

6 x 3031422 → 3031422

~~1 x 5053647~~

aw



DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																																									
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																																																																							
Description Work Order Deviation Dart Aerospace Ltd. 1270 Aberdeen Street Hawkesbury, ON K6A 1K7 CANADA TEL.: 1 813 632-8200 Email: sales@dartaero.com www.dartaerospace.com Container No: S061010 Part: D2360 Job No: 171400 Serial No/Batch: S061010 Revision: Inspector: Date: 04/14/18																																																																											
Root Cause <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Environment</td><td>☐</td><td>No Re-verification</td><td>☐</td></tr> <tr><td>Design</td><td>☐</td><td>Operator</td><td>☐</td></tr> <tr><td>Doc/Data</td><td>☐</td><td>Offset/Setup</td><td>☐</td></tr> <tr><td>Equip/Tooling</td><td>☐</td><td>Supplier</td><td>☐</td></tr> <tr><td>Handling/Pre</td><td>☐</td><td>Training</td><td>☐</td></tr> <tr><td>Material</td><td>☐</td><td>Use for Testing</td><td>☐</td></tr> <tr><td>Internal Transport</td><td>☐</td><td>Poor Information</td><td>☐</td></tr> <tr><td>Tribal Knowledge</td><td>☐</td><td>Rushing</td><td>☐</td></tr> <tr><td>LOA</td><td>☐</td><td>Product Improvement</td><td>☐</td></tr> <tr><td>Substation</td><td>☐</td><td>Process Improvement</td><td>☐</td></tr> <tr><td>Past Expiry Date</td><td>☐</td><td>Manufacturing Process</td><td>☐</td></tr> <tr><td>Misidentified</td><td>☐</td><td>Past Due</td><td>☐</td></tr> </table> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Pressure/Fr</td><td>☐</td></tr> <tr><td>Bending</td><td>☐</td></tr> <tr><td>Centre Not</td><td>☐</td></tr> <tr><td>Cracks</td><td>☐</td></tr> <tr><td>Crimp/Kink</td><td>☐</td></tr> <tr><td>Cuffs</td><td>☐</td></tr> <tr><td>Crushing</td><td>☐</td></tr> <tr><td>Heat Treat</td><td>☐</td></tr> <tr><td>Wave/Twist in Tube</td><td>☐</td></tr> <tr><td>Marks/Chatter</td><td>☐</td></tr> <tr><td colspan="2" style="text-align: center;">OTHER : _____</td></tr> </table>						Environment	☐	No Re-verification	☐	Design	☐	Operator	☐	Doc/Data	☐	Offset/Setup	☐	Equip/Tooling	☐	Supplier	☐	Handling/Pre	☐	Training	☐	Material	☐	Use for Testing	☐	Internal Transport	☐	Poor Information	☐	Tribal Knowledge	☐	Rushing	☐	LOA	☐	Product Improvement	☐	Substation	☐	Process Improvement	☐	Past Expiry Date	☐	Manufacturing Process	☐	Misidentified	☐	Past Due	☐	Pressure/Fr	☐	Bending	☐	Centre Not	☐	Cracks	☐	Crimp/Kink	☐	Cuffs	☐	Crushing	☐	Heat Treat	☐	Wave/Twist in Tube	☐	Marks/Chatter	☐	OTHER : _____	
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Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6201	T Extrusion	10.5400 ft (1.054 ea)	90-Start up Operation	
AN526C1032R18	Screw	12 10 Ea (1 ea)	170-Small Fab	F108079
D2002-015	Knob	24 20 Ea (2 ea)	170-Small Fab	50410625x 5041060 19x
D2345	Lock Channel	12 10 Ea (1 ea)	170-Small Fab	5054918 10x
D2366	Lock Handle	24 20 Ea (2 ea)	170-Small Fab	5041468
D2367	Handle Knob	12 10 Ea (1 ea)	170-Small Fab	F155485 12 504115110
D2372	Quick Release	24 20 Ea (2 ea)	170-Small Fab	5039675 2x 5061833 22x
D2373	Spring	12 10 Ea (1 ea)	170-Small Fab	5054946
D2444	Pip Pin Assembly	12 10 Ea (1 ea)	170-Small Fab	5060705 6x 5065600 4x
MS20470AD3-4	Rivet, Universal Head	72 10 Ea (1 ea)	170-Small Fab	F1136665-40
MS21042L3	Nut	36 30 Ea (3 ea)	170-Small Fab	5062377
MS27039-1-13	Screw	12 10 Ea (1 ea)	170-Small Fab	F125654
MS27039-1-15	Screw	24 20 Ea (2 ea)	170-Small Fab	5003923
NAS1149D0332J	Washer	86 80 Ea (8 ea)	170-Small Fab	5020600
NAS1149D0363J	Washer	24 20 Ea (2 ea)	170-Small Fab	5015269
NAS679A3W	Nut	12 10 Ea (1 ea)	170-Small Fab	F12409

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D6201	11	45	0
170-Small Fab	AN526C1032R18	10	110	0
	D2002-015	20	49	0
	D2345	10	12	0
	D2366	20	53	0
	D2367	10	29	0
	D2372	20	29	0
	D2373	10	31	0
	D2444	10	8	0
	MS20470AD3-4	10	6,953	0
	MS21042L3	30	2,571	0
	MS27039-1-13	10	397	0
	MS27039-1-15	20	394	0
	NAS1149D0332J	80	3,212	0
	NAS1149D0363J	20	2,883	0
	NAS679A3W	10	143	0

Part Specifications

Specifications could not be found.

603049

DQA: _____ Date: _____

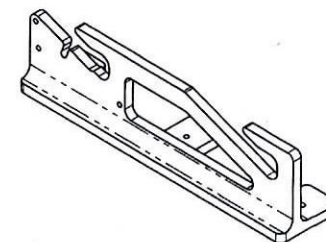


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					



1) MATERIAL: MAKE FROM D6201-125 EXTRUSION
REF. 8061-T6/T651 PER QQ-A-200/8

2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: IDENTIFY WITH DART P/N "D2341" AND B/N "BXXXXXX" ON BOTTOM FACE PER QSI 044 6.1

7) WEIGHT: 1.64 lbs

DESIGN	BW	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D2341 TITLE LITTER TIE DOWN BRACKET (LOOKING COPYRIGHT © 1995 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	REV. G
DRAWN	MB		SHEET 1 OF
CHECKED	AJS		SCALE
MFG. APPR.	JLM		NT
APPROVED	HS		
DE APPR.	DS		
DATE	15.11.12		

DQA: _____ Date: _____

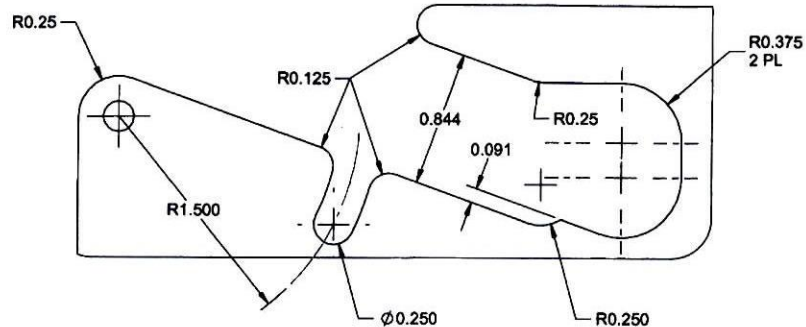


WORK ORDER NON-CONFORMANCE / UPDATE

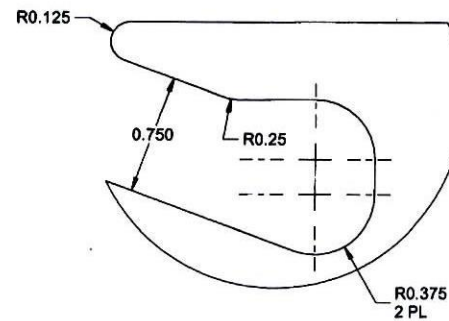
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Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
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Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								



DETAIL A C6-1
SCALE 2X



DETAIL B C4-1
SCALE 2X

RELEASED
2016-04-18

APPROVED

DESIGN	BW	DART AEROSPACE LTD	
DRAWN	MB	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AJS	DRAWING NO.	REV. G
MFG. APPR.	JLM	D2341	SHEET 2 OF 2
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	LITTER TIE DOWN BRACKET (LOCKING)	NTS
DATE	15.11.12	COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

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OTHER : ☐					